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Awe Expands People'S Perception of Time, Alters Decision Making, and Enhances Well-Being

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Although marketers often incorporate awe-eliciting stimuli into promotional materials, surprisingly little is known about awe's downstream effects. In three experiments, we examine the temporal consequences of awe and find that awe (vs. happiness or neutral feelings) expands one's perception of time, which in turn influences consumer decisions and subjective well-being.

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Awe Expands People's Perception of Time, Alters Decision Making, and Enhances Well-Being

EXTENDED ABSTRACT

Time is a scarce consumer commodity (Leclerc, Schmitt, & Dube, 1995). In fact, feeling one has too much to do and too little time is known as "time famine" (Perlow, 1999) and produces undesirable consequences including fatigue, stress, and even postponing a doctor's visit when ill (Lehto, 1998; Vuckovic, 1999). Although science cannot expand the amount of time in each day, could it shift consumers' perceptions of how much time is available? Three experiments examined whether experiencing awe can expand time perceptions and, in turn, impact consumer decision-making and well-being.

Can awe, defined as the feeling that arises when one encounters a stimulus so strikingly vast (in time, scope, complexity, ability, or power) it provokes a need to update one's mental schemas (Keltner & Haidt, 2003), increase perceived time availability? Prior research and theory suggest so. Experiences involving awe, such as optimal athletic performances (Ravizza, 1977) and spiritual events (Fredrickson & Anderson, 1999) often involve a sense of timelessness. The phenomenology of awe, therefore, suggests it might expand time perceptions. Two psychological theories are also relevant. The first is the extended-now theory (Vohs & Schmeichel, 2003), which demonstrates focusing on the present moment elongates time perceptions. Awe captivates people's attention on what is unfolding

before them, which the extended-now theory predicts would expand time perceptions. The second is Socioemotional Selectivity Theory, which shows people seek to acquire knowledge when time feels expansive (Carstensen, Isaacowitz, & Charles, 1999). Awe's triggers within people a desire to create new knowledge structures (Keltner & Haidt, 2003), which therefore may be a signal that awe leads the mind to perceive time as expansive.

Awe's predicted ability to expand time perceptions was also hypothesized to have several consequences. First, perceived time availability is thought to affect certain prosocial decisions. For instance, time scarcity hinders the tendency to help someone in distress (Darley & Batson, 1973) and is a common barrier to volunteering (Hall et al., 2009). Therefore, awe, by creating the perception of plentiful time, might increase one's willingness to spend time helping others. Second, time perception can influence people's decisions about how to live life. For instance, insufficient time is an oft-cited reason for not engaging in leisure experiences (Mannell & Zuzanek, 1991). Time perception may also influence decisions to acquire experiences versus material goods (Van Boven & Gilovich, 2003), as one inherent quality of experiential goods is they require the experiencer devote time to savor the attendant feelings and sensations (Quoidbach et al., 2010). Thus, by inducing a sense of ample time availability, awe might enhance preferences for experiences. Third, time perception is often an indicator of well-being. For instance, people who report feeling "always" rushed have lower life satisfaction than do others (Robinson & Godbey, 1997) and feeling one has little time available has been linked to depressive symptoms (Roxburgh, 2004). Thus, awe, through expanding time perceptions, might boost momentary life satisfaction.

Experiment 1 tested whether feeling awe expands time perceptions. To demonstrate that awe's temporal consequences are not characteristic of all positive emotions, awe was contrasted with happiness. Because awe is often elicited during events that one might associate with minimal time pressure (such as exposure to nature; Shiota, Keltner, & Mossman, 2007), it is possible that perceiving time as expansive is merely a prerequisite for experiencing awe, and not a consequence thereof. To address this alternative account, all participants were initially primed to perceive time as constricted, using a sentence unscramble task (Srull & Wyer, 1979). Next, participants watched either a one minute awe-eliciting or happiness-eliciting commercial for an LCD television. Participants subsequently reported their agreement on a perceived-time-availability index ("I have lots of time in which I can get things done," "time is slipping away" (reverse-scored), "time is expanded," and "time is boundless") and current emotions. Manipulation checks confirmed awe (versus happiness) condition participants experienced more awe and less happiness. An ANOVA then revealed awe (versus happiness) condition participants perceived greater time availability. Furthermore, across both conditions, stronger feelings of awe were correlated with greater perceived time availability.

Experiment 2 tested whether awe, via influencing time perceptions, affects willingness to volunteer time. In this experiment, momentary impatience was the measure of time perception, as it is associated with perceiving time as insufficient (Glass, Snyder, & Hollis, 1974; Lang & Markowitz, 1986). To elicit emotions, participants wrote about a personal experience, with those in the awe [happiness] condition writing about an experience that made them feel awe [happiness]. Participants then reported their feelings of impatience, willingness to donate time, willingness to donate money, and current emotions. Manipulation checks confirmed awe (versus happiness) condition participants experienced more awe and less happiness. An ANOVA then revealed awe (versus happiness) condition participants

reported reduced impatience and a greater willingness to volunteer time. Finally, a mediation analysis determined awe's influence on time donation was driven by its influence on time perception: Awe (versus happiness) reduced impatience, which in turn increased willingness to donate time. Importantly, the awe and happiness conditions did not differ in willingness to donate money (a non-temporal form of prosociality), ruling out the alternative explanation that awe simply increases all prosociality.

Experiment 3 tested whether awe influences well-being and consumption decisions via expanding time. To elicit emotions (awe versus neutral), participants read stories depicting prototypical elicitors of the target emotion (Griskevicius, Shiota, & Neufeld, 2010). Participants subsequently reported their feelings of impatience, momentary life satisfaction, hypothetical choices between experiential versus material goods, and current emotions. A manipulation check confirmed awe (versus neutral) condition participants experienced more awe. ANOVAs then revealed awe (versus neutral) condition participants reported reduced impatience, greater life satisfaction, and preferred more experiential (versus material) goods. Mediation analyses determined awe's influence on life satisfaction and experiential (versus material) choices was driven by its influence on time perception: Awe (versus neutral feelings) reduced impatience, which in turn increased life satisfaction and preferences for experiential goods.

In sum, awe increased willingness to volunteer time, preferences for experiential goods, and life satisfaction, all through expanding perceptions of time. Thus, awe-eliciting experiences might offer an effective solution to the feelings of time starvation that plague consumers in modern society.

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Giving Time Gives You More Time

EXTENDED ABSTRACT

Many of us feel we are victims of a "time famine" (Perlow 1999), having too much to do and not enough time to do it. For example, parents are spending both more time working and more time with their children, yet still feel they are falling short (Bianchi, Robinson, and Milkie 2007)...if only there were a few more hours in a day. Given that our time is objectively constrained by a 24 hour day, and ultimately mortality, one important question is whether there are ways to feel like we have more time. We examine one way in which doing more can result in feeling less busy. In a series of experiments, we find that giving time to another person counteracts the time famine, making time feel more expansive and the future full of possibilities.

Volunteering time can benefit givers in multiple ways, from reducing depression (Musick and Wilson 2003), to improving physical health (Thoits and Hewitt 2001), to delaying death (Oman, Thoresen, and McMahon 1999). Giving support to others lessens anxiety over